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A Call for an Immediate Stop to the Unsustainable Xiaonanhai Project (Pre-construction Preparation)

An Open Letter from the Chinese Environmental Non-Governmental Organizations (ENGO): A Call for an Immediate Stop on the Unsustainable Xiaonanhai Project (Pre-construction Preparation)

March 31st, 2012

Dear Honorable Premier Wen Jiabao, Vice Premier Zhang Dejiang:

Thank you for taking time to consider the proposed Xiaonanhai Hydroelectric Station project in Chongqing and the threats confronted by the "Upper Yangtze Rare and Endemic Fish National Nature Reserve." As scientists and social organizations who have devoted years of work to environmental protection and sustainable development in China, we are strongly opposed to the construction of Xiaonanhai Hydroelectric Station in Chongqing.

The construction of the Xiaonanhai Hydroelectric Station is neither scientific nor economic. The power station will block the final ecological corridor for the migration and reproduction of rare and endemic fishes in the upper reaches of the Yangtze River, thus resulting in devastating impacts on the aquatic ecosystem of the river. Moreover, the power station has neither strategic energy significance nor any prominent economic benefits. With huge environmental costs and limited electricity generation, the Xiaonanhai Hydroelectric Station will do more harm than good.

The *Santong Yiping* [Three Connections and One Leveling, i.e. preparation stage] project foundation stone laying ceremony of the Xiaonanhai Hydroelectric Station was held on the 29th of March, which means that the pre-construction of the project is just around the corner. We hereby strongly urge that the State Council, the relevant departments and the Chongqing municipal government make careful decisions to avoid the irreparable ecological destruction and enormous waste that the construction of the power station will cause.

I. The Construction of the Xiaonanhai Hydroelectric Station Will Do More Harm than Good, Generate Little Economic Benefits, and Cause Enormous Ecological Damage

The per kilowatt investment scale of the Xiaonanhai Hydroelectric Station is 2-4 times that of adjacent power stations. It is estimated that the investment per kilowatt of installed capacity of the completed Three Gorges Hydroelectric Station is around 4,950 yuan. According to planned data, the investment per kilowatt of installed capacity of Baihetan, Xiluodu and Xiangjiaba, three cascade power stations on the lower reaches of Jinsha River, should be 3,997 yuan, 3,583 yuan and 5,749 yuan respectively. According to Chongqing Daily's report on the Xiaonanhai Station foundation stone laying ceremony, the Station's investment per kilowatt of installed capacity will reach 16,000 yuan, which is 3.6 times the average investment of the three cascade power stations.

Meanwhile, the planning of the Xiaonanhai Hydroelectric Station has caused serious losses in the protection scope and function of the "Upper Yangtze Rare and Endemic Fish National Nature Reserve." In order to make way for the construction, the land where the Xiaonanhai Dam is sited and an adjacent river section of 22.5 km has been excluded from the reserve. The 73.3 km natural river section in the reserve will be turned into a reservoir. As a result, the protected section of the river will be shortened by at least 95.8 km, accounting for 27% of the 353.16 km Yangtze River mainstream in the reserve, making the National Nature Reserve exist only in name. The dam, once built, will become an enormous physical barrier, directly blocking the migration path of migratory fish between the Reserve and the Three Gorges Reservoir area. It will also block the reproduction process of the "floating roe" of various rare fish species. The reservoir, formed by the dam, will drown the buffer zone and the experimental zone of the National Nature Reserve, destroying large areas of spawning sites and habitats of rare and endemic fish, resulting in devastating impacts to the Upper Yangtze River's aquatic ecological system.

Many experts and research institutions, including Cao Wenxuan, a Chinese Academy of Sciences academician, and the Nanjing Research Institute of the Ministry of Environmental Protection, have indicated that the Xiaonanhai river section must be open and unblocked, for it is a channel vital to the survival of rare and endemic fishes in the Reserve and the proliferation of the Three Gorges Reservoir fishery resources. No water conservancy projects should be constructed in this region. Such kind of ecological corridors cannot be replaced by building fish ways or any other fish passage facilities.

A project like this, which has limited economic benefits, huge threats on the survival of dozens of species and may cause irreversible damage to various species, is rare in the Chinese construction history.

II. The Reasons for Constructing Xiaonanhai Hydroelectric Station are Insufficient. Alternative Plans Exist

The construction of the Xiaonanhai Hydroelectric Station is based on the *Comprehensive Utilization Pan of the Yangtze River Basin*, which was completed in 1990. Back then, the Reserve had not been established. The Department that made the Utilization Plan had limited understanding of ecological and environmental protection and based their plan on the principle of utilizing all water resources to the fullest for hydroelectric generation. Today, under the context of "in-depth learning and practice of the Scientific Outlook on Development," it would be a violation of the principle of sustainable development and an intellectual regression if the Utilization Plan is still used as the basis for construction.

The Xiaonanhai Hydroelectric Station project is mainly constructed to meet the developing electrical energy demand of the Chongqing municipal government. However, we should point out that although the designed average annual power generation of the Xioananhai Station was raised to 10.2 billion kWh, it only accounts for 3.46% of the average annual power generation of its adjacent four cascade power stations and the Three Gorges power station.

A series of alternative plans are worth considering in meeting the electricity demand in Chongqing. Establishing a cooperative and sharing relationship between Chongqing and the Three Gorges Corporation on the four dams on the lower Jingsha River is a viable solution. Since Chongqing planned to invest in the Xiaonanhai Hydroelectric Station, the government may instead invest the money on the four dams of the Three Gorges Corporation, thus acquiring the corresponding share of ownership and benefits (electricity).

This solution can be even more attractive. The Three Gorges Corporation may further increase the overall installed capacity by adjusting the flood control capacity of the four dams and utilizing the detention basin in the middle reaches of the Yangtze River to manage flood risks.

Through electrical power coordination, Chongqing may achieve more hydroelectric installed capacity with the same scale of investment, thereby closing the power supply gap. Moreover, the construction of the Xiangjiaba Hydroelectric Station in Sichuan province has already begun. The Station will be connected to Shanghai with a "±800KV DC UHV Transmission Line" which will pass through Chongqing, where the power transmission capacity will be greatly enhanced. This has laid an important foundation for the project's implementation.

III. Our Appeals and Recommendations

1. Suspend the *Santong Yiping* Construction of the Xiaonanhai Hydroelectric Station to Reevaluate the Pros and Cons of the Station.

Under the heavy pressure of Yangtze River exploitation, the National Nature Reserve is the last refuge for endangered fish. We earnestly recommend that the last remaining national fish reserve in the Yangtze River mainstream be protected in accordance with the law. We should prohibit all destructive activities and leave behind valuable aquatic biodiversity resources for future generations.

2. Hold Citizen Hearings

The National Nature Reserve of Rare and Endemic Fishes in the Upper Reaches of the Yangtze River involves four provinces and municipalities: Sichuan province, Chongqing municipality, Guizhou province and Yunnan province. An unauthorized hydroelectric station construction in Chongqing may cause chain reactions and will eventually make the Reserve exist in name only. Public opinions should be valued. Hearings give the public a way to participate, and the opinions of various interested parties can be heard.

3. Take Sufficient Measures to Maintain the Integrity and Ecological Function of Nature Reserves

Nature reserves are an important guarantee for the long-term ecological security and economic growth in China. The reserves also embody China's national image as a responsible country for all humankind and our Earth. We suggest that, with this Reserve as a key case study, we conduct transformation research and put effort into national nature reserve management and protection in accordance with guidelines from the central government, as well as relevant laws and regulations. The protection results should also be strengthened to avoid damages cause by development and construction.

4. Consider Alternative Solutions to Meet Chongqing's Power Demand

We fully understand that Chongqing has its reasons to select the Xiaonanhai Dam project – which is a huge investment but has limited benefits – in a situation where the city is experiencing limited social and economic growth. However, there are many possible alternatives. In order to avoid enormous ecological and social losses, Chongqing's energy and economic growth issues should be resolved by proactively considering alternative solutions.

At the same time, the Three Gorges Corporation, which exerts an influence on Chongqing, should increase its compensation to the municipality with part of its profits generated from hydroelectric development and operation. We support this reasonable request by Chongqing. However, we also believe that the interest struggle between Chongqing and Three Gorges Corporation should not be based on further damaging the ecological environment, which has already been seriously destroyed by the Three Gorges project.

We hope that the above recommendations will be considered. We also wish to strengthen communication with the Chongqing municipality and relevant departments to jointly promote ecological construction and environmental protection in the upper reaches of the Yangtze River. We should take responsibility for China's future generations and the ecological health of the Yangtze River basin. Based on this principle, we should preserve the precious aquatic biodiversity resources of the Yangtze River for present and future generations.

Signed experts and institutions:

Lv Zhi, Professor of the School of Life Sciences, Peking University
Xie Yan, Associate Research Fellow at the Institute of Zoology, Chinese Academy of Sciences
Zheng Yisheng, Research Fellow at the Institute of Quantitative and Technical Economics, Chinese Academy of Social Sciences
Yang Yong, Independent Geologist
All team members of the 2012 Yangtze River Decade Project
Friends of Nature
Shanshui Conservation Center
Daerwen Nature Knowledge Association
Institute of Public and Environmental Affairs
Green Earth Volunteers
Saunders's Gull Protection Association in Panjin, Liaoning province
Xiamen Greencross Association
Red Phoenix Volunteer Association, Shaanxi province
Blue Dalian
Home Guardian Volunteer
Green Camel Bell Environment and Development Center
Institute for Environment and Development
Green Panjin
Huaihe River Guards
Envirofriends
Hengduan Mountain Research Group
Wuhu Ecology Center
Green Hanjiang

中国民间环保组织公开信：呼吁紧急叫停得不偿失的小南海水电站（前期）工程

尊敬的温家宝总理、张德江副总理：

感谢您能拨冗关心重庆市拟建小南海水电站和“长江上游珍稀特有鱼类国家级自然保护区”受到威胁一事。作为多年致力于中国环境保护与可持续发展的科学工作者和社会组织，我们坚决反对重庆市小南海水电站的建设。

建设小南海水电站既不科学，也不经济。该电站不仅将阻断长江上游珍稀特有鱼类迁徙繁衍最后的生态通道，对长江上游的水生生态系统将造成毁灭性影响，而且它也没有重要的能源战略意义，更没有突出的经济效益。环境代价极大，而发电效益有限，重庆长江小南海水电站建设得不偿失。

鉴于小南海水电站“三通一平”工程奠基仪式已于3月29日举行，前期工程建设在即，我们强烈呼吁国务院、有关部门和重庆市政府慎重决策，避免因该电站的开发建设造成的无法弥补的生态破坏和巨大浪费。

一、修建小南海水电站经济效益较低，而生态破坏巨大，得不偿失

小南海水电站的单位千瓦投资规模也是这几个相邻电站的2到4倍。据测算，已经建成的三峡水电站单位千瓦装机投资约为4950元，按照规划数据，金沙江下游三座梯级电站的单位千瓦装机投资分别为，白鹤滩3997元，溪洛渡3538元，向家坝5749元。而根据《重庆日报》关于小南海水电站奠基仪式的报道，拟建小南海水电站的单位千瓦装机投资将达到16000元，是金沙江下游三座梯级电站平均投资的3.6倍多。

与此同时，由于小南海水电站的规划，致使
“长江上游珍稀特有鱼类保护区”的保护范围和功能受到严重损失。为了给水电站的修建让道，小南海电站大坝所在地及其邻近的22.5km长的江段从保护区中被迫砍掉，同时将小南海电站大坝以上73.3km长的保护区自然江段改变为水库库区，使保护区长江干流江段的损失长度至少达到95.8km，占保护区长江干流段353.16km长度的27%，使国家级自然保护区名存实亡。大坝一旦修建，将成为一道巨大的物理屏障，直接阻碍保护区与三峡库区之间洄游性鱼类的迁移通道，并阻断多种珍稀鱼类“漂浮性卵”的繁育过程；大坝所形成水库将淹没鱼类保护区的缓冲区和实验区，导致多种珍稀、特有鱼类产卵场和栖息地大量丧失，对长江上游的水生生态系统将造成毁灭性影响。

中科院院士曹文轩、环保部南京科研所等多位专家和的多家研究机构都曾表示，小南海所在江段关系到上游保护区
内珍稀特有鱼类的生存和三峡水库渔业资源增殖的至关重要的通道，必须保持畅通无阻。不应当在这里修建任何水利工程。这样的生态通道也是修建鱼道或其他任何过鱼设施所不能取代的。

在中国工程建设史上，少有这样的工程，经济效益如此有限，却同时危胁数十种动物的生存，并可能导致多个物种的不可逆的损害。

二、修建小南海水电站依据不足，且有替代方案

建设小南海水电站的依据是1990年完成的《长江流域综合利用规划》。当时，该保护区尚未建立，流域综合利用规划部门对于生态环境保护的认识还相当有限，规划是完全以用尽每一米水头为水能开发原则的。时至今日，在“深入学习实践科学发展观”的背景下，仍然以此作为开发依据，完全违背可持续发展的原则，是认识上的倒退。

建设小南海水电工程，主要的理由是为了满足重庆市政府发展中的电力能源需求。但是，我们不得不注意到，小南海水电站设计年平均发电量虽提高至102亿度，但仍仅仅是与其相邻的金沙江下游四个梯级和三峡水电站年平均发电量的3.46%。

对于小南海水电站的问题，考虑解决重庆电力供应，有一系列替代方案值得考虑。其中一个非常可行的是，重庆市和三峡总公司就金沙江下游的四座大坝建立合作共享关系。重庆可把原本计划投资在小南海水电站的投资投在三峡总公司四座大坝中，从而获得相应比例的所有权和 利益（电能）。

更有吸引力的是，通过调整这四个水库的防洪库容，利用长江中游蓄滞洪区承担这一部分洪水风险，三峡总公司有可能进一步提高总的装机容量。

通过电力协调，重庆有可能实现同等投资规模下更多的水电装机容量，解决重庆电力缺口问题。而且，四川向家坝水电站经重庆至上海的“±800千伏直流特高压输电线路”已经动工建设，届时重庆市电力输送能力将大大提高，这为此方案的施行奠定了重要的基础。

三、我们的呼吁和建议

1，暂停小南海水电站“三通一平”的施工，重新评估小南海水电站建设的利弊得失。

长江上游珍稀特有鱼类国家级自然保护区是长江河流开发重压下为鱼类保存的最后的庇护所。恳切建议，严格依法保全长江干流唯一的国家级鱼类保护区，禁止任何破坏行为，为子孙后代留下宝贵的水生生物多样性资源。

2，召开公民听证会

长江上游珍稀特有鱼类自然保护区涉及四川、重庆、贵州、云南四个省市。重庆市擅自进行水电站建设，恐产生连锁反应，最终使保护区名存实亡。应当充分重视公众意见，采用听证会这种公众参与的形式，广泛听取各利益方意见。

3，充分采取措施，保持自然保护区的完整性和生态功能

自然保护区是中国长期的生态安全和经济发展的重要保障，也是中国对全人类、对地球家园负责任的国家形象之体现。建议根据中央有关精神和相关法律法规，以此保护区为重点案例，进行全国自然保护区管理与保护的转型调研和工作，并着手加强保护效果，避免因开发建设造成的破坏。

4，考虑替代方案解决重庆电力供应问题。

我们充分理解重庆市在社会和经济发展受到局限的情况下，选择小南海这样一个投资巨大而效益有限的水坝项目，也有不得已的因素。小南海水电站有多个可考虑的替代方案，为了避免巨大的生态和社会损失，应该积极考虑替代方案，解决重庆市的能源和经济发展问题。

同时，对重庆市造成影响的一方，也就是三峡建设总公司，应当以其水电开发运行中获得的巨额利润加大对重庆的补偿力度，我们支持重庆市的这种合理要求；但同时我们认为，双方的利益博弈不应该建立在进一步损害本已在三峡开发中受到严重损害的生态环境的基础上。

以上建议望予考虑。我们希望与重庆市和各有关部门加强沟通与交流，共同推进长江上游的生态建设和环境保护。本着对中华民族的子孙后代负责、对长江流域的生态健康负责的原则，为今世后代守护弥足珍贵的长江水生生物多样性资源。

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